

Table : antimicrobial susceptibility (n/%) (PS 2-467)

Bacteria	N	CZ	CXM	CRO	AMC	ETP	SXT	GM	LVX
<i>E. coli</i>	16	0 (0)	2 (13)	2 (13)	4 (25)	15 (94)	5 (31)	11 (69)	3 (19)
<i>K. pneumoniae</i>	32	16 (50)	16 (50)	21 (66)	20 (63)	31 (97)	19 (59)	27(84)	22 (69)
<i>P. mirabilis</i>	8	1 (13)	7 (88)	7 (88)	7 (88)	8 (100)	0 (0)	6 (63)	3 (38)
Bacteria	N	CLR	CXM	CRO	AM	SAM	SXT	MXF	LVX
<i>H. influenzae</i>	8	0 (0)	7 (89)	8 (100)	8 (100)	8(100)	0(0)	0 (0)	0 (0)
Bacteria	N	SAM	TZP	CAZ	FEP	IPM	AN	CIP	LVX
<i>P. aeruginosa</i>	44	-	36 (82)	41 (93)	44(100)	40 (91)	1(2)	16 (36)	15 (34)
<i>A.baumannii</i>	28	2 (7)	5 (18)	5 (18)	9 (32)	9 (32)	9(32)	4(14)	-

*Abbreviation: AM = ampicillin; AMC = amoxicillin-clavulanate; AN = amikacin; CAZ = ceftazidime; CIP = ciprofloxacin; CLR = clarithromycin; CRO = ceftriaxone; CXM = cefuroxime; CZ = cefazolin; ETP = ertapenem; FEP = cefepime; GM = gentamicin; IPM = imipenem; LVX = levofloxacin; MXF = moxifloxacin; SAM = ampicillin-sulbactam; SXT = Trimethoprim-sulfamethoxazole; TZP = piperacillin-tazobactam

** Percentage of multiple drug resistant isolates (defined as acquired non-susceptibility to at least one agent in three or more antimicrobial categories) : *E. coli* 69%, *K. pneumoniae* 25%, *P. mirabilis* 13%, *H. influenzae* 13%, *P. aeruginosa* 23%, *A. baumannii* 82%

Conclusions: This study revealed high percentage of multiple drug resistant pathogens among LTCF residents, especially fluoroquinolones. Empirical antimicrobial therapy might be optimized according to the local susceptibility data.

PS 2-468

TUBERCULOSIS OR NOT TUBERCULOSIS IN ADULT INTENSIVE CARE UNITS

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Purpose: We tried to investigate the factors which could predict those patients with positive acid-fast smear (AFS) results were microbiologically confirmed tuberculosis (TB) patients.

Methods: Since January 2008 to July 2013, we retrospectively but consecutively enrolled all adult patients admitted to the intensive care units (ICUs) of Kaohsiung Medical University Hospital and had positive AFS results of their passively-sucked respiratory tract secretion due to (1) respiratory failure of any causes; and (2) chest X-ray abnormality. We defined those patients with finally microbiologically confirmed TB as TB group and microbiologically confirmed non-tuberculous mycobacterium (NTM) as NTM group. We compared those factors between TB and NTM groups. Furthermore, we validate our findings with the validation cohort who were enrolled retrospectively between August 2013 and September 2014.

Results: We enrolled 151 patients (mean age 71.0 ± 15.7 years) and there were 104 (68.9%) men. One hundred and five (69.5%) patients were judged as TB group and 46 (30.5%) were NTM group. Multivariate logistic regression analysis revealed that NTM group were significantly elder than TB group (≥ 65 year-old patients among NTM group: 78.3% versus TB group: 61.0%; adjusted odds ratio = 2.4; $p = 0.035$) and NTM group presented with significantly less hypoalbuminemia (serum albumin < 2.5 gm/dL) than TB group (30.4% versus 57.1%; adjusted odds ratio = 0.3; $p = 0.002$). We validated our findings by validation cohort and found that hypoalbuminemia possessed a 76% positive predictive value to TB and 71% negative predictive value to TB.

Conclusions: Those adult patients in ICUs with positive AFS results of their respiratory tract secretion should be evaluated carefully. Clinicians should be more alert to those younger, as well as patients with serious hypoalbuminemia.

PS 2-469

ANALYSIS OF INTERVENTION EFFECTIVENESS OF INFECTION CONTROL OF MULTIDRUG-RESISTANT BACTERIA INFECTION IN A GENERAL TERTIARY HOSPITAL

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Purpose: To research the intervention effectiveness of infection control of Hospital-acquired Multidrug-resistant organism infections (MDRO-HAI) in a general tertiary hospital.

Methods: A prospective survey was carried out for patients with MDROs-HOI in a general tertiary hospital from 2011 to 2013. The main interventions were hand hygiene, contact isolation, analyzing and feedback the surveillance data to healthcare workers every month and year for continuous improvement of quality.

Results: From 2011 to 2013, there were totally 188245 patients and 1702830 patient days including 705 MDROs-HOI. The incidence of MDROs-HOI was a statistically decrease ($\chi^2 = 20.15, P < 0.05$) from 0.48‰ to 0.31‰ last 3 years, among which the incidence of ICU was significantly lower in 2013 (2.11‰) than that in 2011 (4.82‰) ($\chi^2 = 23.17, P < 0.05$), and the incidence of internal medicine was significantly lower in 2013 (0.31‰) than that in 2012 (0.49‰) ($\chi^2 = 8.06, P < 0.05$).

Conclusions: The control of MDROs-HOI is very effective, among which the incidence of ICU and internal medicine was significantly lower.

PS 2-470

IMPROVING THE RATE OF MULTIDRUG-RESISTANT ORGANISMS AT A MEDICAL CENTER IN CENTRAL TAIWAN

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Purpose: In 2013, the rates of multidrug-resistant organisms (MDRO), including MRSA, VRE, CRAB, CRPA, CREC, and CRKP from clinical specimen were 55%, 13.3%, 60.6%, 12.2%, 0.2%, and 1.9% respectively. The clinical antibiotic susceptibility data of 2013 were similar to that of previous years in our hospital. However, the correctness and compliance of hand hygiene decreased in 2013. We implemented antibiotic stewardship program (ASP) to improve the MDRO rates in 2014.

Methods: The execution of ASP involved all HCW, including physicians, nurses, pharmacists, and cleaning personnel. Education of antibiotic usage, standard operating procedures, and infection control (IC) precaution were enforced, information technology was established to monitor antibiotic consumption, and bundle cares for CVP, VAP, and UTI were initiated.

Results: The respective rates of MRSA, VRE, CRAB, CRPA, CREC, CRKP were 51%, 11.6%, 47.7%, 8.8%, 0.7%, 4.6% from clinical specimen in the first half year of 2014. Reduction of antibiotic consumption was observed in the uses of quinolones, penicillins, glycopeptides, and aminoglycosides.

Conclusions: Though MRSA, VRE, CRAB and CRPA were decreasing during the study period, CREC and CRKP began to increase. In 2014. The performance of active MDRO screening possibly lead to the increases of CREC and CRKP isolates. Employing peer inspection to enhance hand hygiene, for which the correctness increased to 76.4% in first half of 2014. The audit rates of environmental cleaning and disinfection for MDRO increased from 40% to 90%. The goal of education and implement rates of bundle care were achieved.